



جامعة صنعاء
كلية الطب والعلوم الصحية
دائرة العلوم السريرية الطبية
دفعة بصمه طبيب 31
طب بشري

OPHTHALMOLOGY



Eyelids

Lecture No. **5**

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اللجنة العلمية لدفعة بصمة طبيب 31

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يُصَحِّحُ بِقِرَاءَةِ التَّغْرِيفِ مَعَ الدَّائِرَاتِ
حَيْثُ تَمَّ تَجَنُّبُ مَا ذُكِرَ فِي الدَّائِرَاتِ
وَتَمَّ السَّرَكِينُ عَلَى الْمَعْلُومَاتِ الَّتِي
أَحْصَيْنَاهَا الدَّلِيلُ

بِالتَّوْقِيفِ

■ Anatomy of the eyelids :

It's divided into [anterior lamella
Posterior lamella

- The anterior lamella is composed of skin and orbicularis muscle.

- The posterior lamella is composed of Tarsus and Conjunctiva

* The tarsus and conjunctiva are very adherent

* If a patient had an injury and he lost his lid → in a surgery he must be compensated with a lid containing tarsus

« The tarsus is taken from the ear or the other eye in a procedure called lid sharing → it's taken from the upper lid because it's bigger than the lower → we only take half of it.

- If we suture the lid margin, it must be sutured in layers. Because if it's not sutured in layers, the lid margin will be irregular and the tear film will not be spread correctly.

- Importance of gray line → it's a landmark for surgeons, it's where the surgeon does separation.

- when we need a skin graft for the lid we take it from the retro auricular area

* Eyelashes in the upper lid are estimated to be nearly 150, in the lower lid 75 $\Rightarrow$ They are replaced every 100 days

- In cases with swelling, it's either caused by a sebaceous gland which color is yellow or by a sweat gland which color is like water « fluidy »

- we recognize it's type by the color.

* There's no subcutaneous fat in the skin of the lid. and it reflex the health condition of the patient, like we can diagnose dehydration by dryness or edema by puffiness which appears clearly

• Muscles of The lid

① Levator Palpebrae Superioris $\rightarrow$ elevation of the lid

* it's not present in the lower lid

② Muller's muscle $\rightarrow$ it's not the main elevator. In cases of horner syndrome

$\Rightarrow$ Partial ptosis. It's related to the sympathetic nerve $\Rightarrow$ so in fear $\rightarrow$ the eyes open

③ orbicularis oculi $\Rightarrow$ it closes the eyes if it's injured, the eye stays open $\Rightarrow$ it results in keratitis because of the exposure

* during sleep they must cover their eyes for the fear of "melting Perforation and ulcer" which results in blindness

* In patients who can't close their eyes a surgery must be done $\Rightarrow$ called Tarsorrhaphy and we suture the eyelids even if we fear amblyopia

* Importance of the slit lamp $\Rightarrow$ used in cases of conjunctivitis and allergy and keratoconjunctivitis

* In examination of keratoconjunctivitis we must turn the lid up and check for papillae, follicles and Trachomatous infection

* importance of the lateral canthus $\Rightarrow$ it's a land mark when we use the slit lamp $\Rightarrow$ we put the black mark on it

* If we press on the lacrimal sac $\Rightarrow$ regurgitation occurs $\Rightarrow$ it's called regurgitation test $\Rightarrow$ it occurs in cases of obstruction in chronic dacryocystitis

Q → why the regurgitation test is -ve in acute cases?

in acute cases we don't press on it because it's painful and for the fear of causing spread of infection.

* in cases of dryness we press on it ~~and~~ in obstruction cases and the test comes out -ve.

- Lid crease is formed by levator muscle when it's inserted into the skin

* it's important in surgery ⇒ The surgeon opens there and closes leaving no scars

* Lid crease is absent in congenital ptosis, or normally in some people.

■ Inflammation of the eyelids

Skin Parts ⇒

	Tarsal part
	Orbital part

- The tarsal part is on the tarsus

- The orbital part is around the orbit

- Dermatitis

acute
chronic

- Blepharitis ⇒ bleph means eyelid margin.

* Because it's in contact with the cornea so any disease in it, it affects the cornea

- Patients with blepharitis come complaining of dryness ~~and~~ foreign body sensation and irritation especially if it's in the margin $\Rightarrow$ because the tear film will be affected

* Dandruff can cause meibomian gland obstruction causing chalazion

* Inflammation of the lid appears as swelling and it's divided into

① Anterior $\rightarrow$ around the eyelashes like in cases of staph. blepharitis

② Posterior $\rightarrow$ in inflammation of the meibomian gland especially in old age

③ Mixed $\rightarrow$ we discover it by slit lamp

* Any patient with inflammation of the lid margin $\Rightarrow$ ask him about if he complains of hair dandruff because people with hair dandruff are susceptible for eyelashes dandruff

- The difference between dandruff that's caused by staph infection or blepharitis is that when we remove the dandruff that's caused by staph infection it leaves ulcers

Q → why dandruff causes conjunctivitis?

Because if part of it gets into the eye it causes reaction causing conjunctivitis and keratitis (marginal keratitis) and it might cause ulcer in severe cases. It occurs more in the area of attachment of the eyelid with the cornea.
* in case of reaction that's caused by antigen and antibody we can use steroids (only in this case)

- The dandruff can also cause notch or thickening of the lid margin.
- Madarosis → absence of lashes caused by inflammation
- Poliosis → whitening of the lashes before ~~its~~ its time in young people

* Poliosis occurs in cases of vitiligo or sympathetic ophthalmia

* How to clean the lid margin correctly

- we bring Baby Johnson Shampoo → dilute it in lots of water. Then clean the eyelashes from the outside using ear buds
" Oily skin "

- sty → is caused by staph infection it can occur in people with low immunity.

- * Errors of refraction causes Chalazion especially in patients with astigmatism because of eye straining.
- * Chalazion is best treated early because it's easily treated $\Rightarrow$ we only give steroid and hot compresses then it disappears. But if it's presented late it needs surgery because the secretions have been encysted by a capsule and can't be removed. Steroid.
- * When we perform a surgery for it we should remove the capsule to avoid recurrence.
- * Some times we give steroid injection to avoid recurrence.
- * The surgery is called expression surgery. The surgery can be done under local anesthesia but in children we must do general anesthesia.

■ Ectropion :-

- 1- Involutional ectropion $\rightarrow$ Commonly occurs in elderly with muscle weakness of the orbicularis
- 2- Cicatricial ectropion $\rightarrow$ by burns like chemicals « The lid will be retracted »
- 3- Congenital $\rightarrow$ in some cases
- 4- Mechanical $\rightarrow$ in cases of tumors or any mass

* In cases of ectropion the patient complains of epiphora and exposure Keratitis

- ulcer
- dryness
- Thickness
- Keratinization

* In case of Cicatricial ectropion → when we take a graft, we take it from Post. auricular or supraclavicular skin

* Patients with leprosy lose the corneal Sensation.

■ Entropion / Trichiasis

- Entropion is more dangerous than ectropion → because of the irritation that might lead to blindness
- * One of the causes is trachoma
- * Some books say that trichiasis is only considered when there's more than four lashes are misdirected but the doctor said even if it's only one we consider it as trichiasis because regardless of their number → the harm is done
- Distichiasis → another row of eyelashes that grow behind the original lashes.

Q → what's the differences between the ciliary injection and conjunctival congestion →

The ciliary injections are around the limbus but the congestion of the conjunctiva is toward the fornices.

RA
AF
RA

■ Ptosis :-

- Normally the lid covers 1-2 mm of the cornea. If more $\Rightarrow$ ptosis

- Causes :- [Congenital
acquired.

① Neurogenic $\rightarrow$ Horner syndrome and oculomotor palsy that's caused by aneurysm - tumor - hemorrhage - metastasis idiopathic or vascular causes like DM

* It could be dangerous or not according to one thing $\Rightarrow$ the pupil.

if it's not spared $\rightarrow$ it's caused by a surgical cause like car accidents

if it's spared $\rightarrow$ vascular causes

but we still have to rule out any hazards

② Myopathic $\rightarrow$ in myasthenia gravis + myopathies

③ Aponeurotic $\rightarrow$ Allergy $\rightarrow$ by itching $\rightarrow$ the muscle separate from its insertion by itching leading to ptosis

④ Mechanical $\rightarrow$ like tumor or trauma

Q $\rightarrow$ When do we rush for surgery in ptosis in children?

If it covers the pupil for the fear of amblyopia and astigmatism

If only for cosmetic causes $\rightarrow$ we usually do it before school.

- The patient with oculomotor palsy complains of squint but the patient doesn't notice it due to ptosis but it becomes clear when he opens it.

* In cases of traumatic ptosis we wait for six months before surgical correction $\Rightarrow$ to wait for the muscle regeneration.

- Measurements of the levator function
Normally it's between 14-15 mm.

- Causes of madarosis

- ① blepharitis ② congenital ③ chemotherapy
- ④ part of alopecia ⑤ psychogenic
- ⑥ tumor ⑦ Thermal.

- Causes of poliosis

- ① blepharitis ② vitiligo ③ SLE
- ④ sympathetic ophthalmia.

- Causes of symblepharon

- ① chemical burns ② conjunctivitis.

* If the symblepharon doesn't involve the cornea $\Rightarrow$ leave it
but if it's attached to the cornea
 $\Rightarrow$ remove surgically.

الانكسور رقم 2 بعنوان

ptosis

- Hypotropia → low set eyes so the lid will be lower than the other ⇒ it's not a true ptosis.
- Cogan Sign → in myasthenia gravis when the patient looks down ⇒ the eye twitches upward
- Increased innervation → when we ~~correct~~ correct the eye with the ptosis the other eye has ptosis.
- Double elevator palsy → when the patient looks up, the other eye doesn't do the same « ptosis + superior rectus palsy »
- Jaw-winking phenomenon → when the patient eats, the eyelids open → treated by removal of the levator muscle surgically
- Bell-phenomenon → absent in 10% of people
 - * in people with absent Bell phenomenon we don't do full correction for the ptosis to ~~protect~~ protect the cornea
 - * Bell phenomenon is upward outward movement of the eye when it's closed
- Ice test → is done for myasthenia gravis diagnosis → we put an ice bag on the ~~eye~~ eye with the ptosis for two minutes if improved ⇒ true myasthenia gravis

* In recent cases we require CT scan or MRI for the fear of Horner Syndrome, Pancoast tumor or Aortic Coarctation.

- Kearns - Sayre Syndrome → The complaint of external ophthalmoplegia → in such patients we must refer them to cardiologists to check ECG for the fear of sudden heart block → death

* In cases with squint and ptosis we fix the squint first

- Involutional Ptosis → characterized by good levator muscle function but it's not in its normal place. So we just put it back to its normal site

* Many eye surgeries are done under local anesthesia so when the surgeon corrects the muscle he asks the patient to move his eyes to check for its function.

- Glasses with crutches → used for external ophthalmoplegia patients

⇒ Patients with external ophthalmoplegia don't move their eyes → so no Bell phenomenon ⇒ we use the glasses instead of surgery to protect the cornea.